Remarks

The claims have been amended to address the indefiniteness and antecedent basis points raised in items 1 to 7, as will be explained in more detail below. In response to the rejections for anticipation or obviousness in items 8-11 of the office action, no amendment is needed, as will now be explained.

Taga is cited as anticipating claim 1 and other claims. Taga shows measuring a Q value by interpolation from a series of BER values at different decision levels in a receiver. Taga (and the present application) acknowledges it was known to sweep though these different decision values to obtain the BER values. Taga indicates that fading over time means the BER values vary during the sweep and so the interpolation contains an error depending on the amount of fading. So Taga proposes taking many decisions simultaneously by providing a signal splitter and multiple decision circuits with different decision levels.

The present invention is concerned with a different problem, and a different solution. Claim 1 of the present application specifies:

> "an optical transmission signal subject to noise and amplitude distortion components, the method comprising determining the amplitude distortion component..."

Taga has no disclosure nor any suggestion of there being noise and amplitude distortion components affecting the eye closure in the receiver, nor of any need to separate the effects of these two components, nor how to measure the amplitude distortion component distinct from the noise component. Accordingly this claim cannot be anticipated by nor obvious over Taga.

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The Examiner cites col 4 lines 40-50 of Taga. This passage is concerned with measuring the BER at each of the different decision levels. It indicates that the range of variation of the decision level depends on the voltage of the digital signal input. There is no hint here of an amplitude distortion component distinct from a noise component in the received signal, nor how to measure the amplitude distortion component.

The specification of the present application explains the amplitude distortion component at page 4 where it is stated:

> "However, when distortion is present as well as noise, e.g . through cross-talk or pulse "smearing" due to dispersion, the result is that there are multiple tracks 7, 8 appearing in the eye diagram on both one and zero levels, and the curves 5,6 near the levels of the ones and zeroes become distorted themselves. The BER roll off is more gradual than with the noise only case. Further in to the eye and away from the distortion effects, the innermost tails of the curves 5, 6 still represent the true Gaussian distribution of the noise, so the BER roll off becomes the same as with the signal only affected by noise."

The other cited reference, Scholz, is cited as showing a computer for BER detection and so does not affect the reasons set out above.
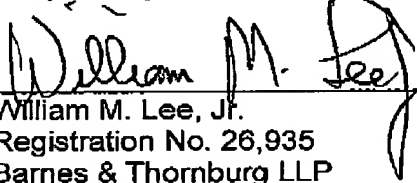
Dependent claims 2 to 8 and 16 to 19 and 28 depend on claim 1 and so are allowable for the same reasons. Independent claim 9 has corresponding distinctive features to those of claim 1 and so is allowable for the same reasons. Dependent claims 10 to 14 depend on claim 9 and so are allowable for the same reasons. Claim 15 has already been allowed. Independent claim 20 has distinctive features corresponding to those of claim 1 and so is allowable for the same reasons. Dependent claims 21 to 25 and 27 depend on claim 20 and so are allowable for the same reasons. Independent claim 26 has been allowed.

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Regarding the indefiniteness points raised in items 1 to 7, the relevant claims have been amended. Claims 2, 10 and 21 have been amended to specify "a high bit error ratio area <u>of the function, away from a center of an eye,</u> and in a low bit error ratio area<u> closer to the centre of the eye</u>." This makes the areas defined relative to a common feature, the eye center, and so those skilled in the art can determine whether a given device or method is within the scope of the claims. Other claims have been amended to become dependent on these claims to ensure proper antecedent basis.

Accordingly all the points raised have been dealt with, all the claims are submitted to be allowable and reconsideration is requested.

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